

8,192 Pixels, 80kHz Scan rate, Camera Link compliant

## DIGITAL LINESCAN CAMERA

## TL-8K35ACL



(Lens optional)

### Applications

- Inspection equipment for liquid crystal panel
- Image processing device for image inspection
- Measuring equipment such as appearance inspection device or dimensional measurement device
- Surface inspection device for sheet-like object
- High-resolution pattern inspection instrument
- Data entry device for image processing unit employing computer

### Specifications

Image sensor	Global shutter CMOS
Number of pixels	8192
Pixel size	3.5 $\mu$ m $\times$ 3.5 $\mu$ m
Photo array length	28.672mm
Scan rate (Data rate)	Full 80kHz (85MHz $\times$ 8TAP) Full 44.7kHz (50MHz $\times$ 8TAP) Base 18kHz (80MHz $\times$ 2TAP)
Video output (Digital output)	8bit Full Configuration 8bit/10bit Base Configuration
Line transfer pulse input	12.5 $\mu$ sec (Min.)
Sensitivity	gain1=1.2, gain2= 4.8 DN/nJ/cm
Saturation exposure	23 ke-(typical value)
Dynamic range	60dB (on the element)
Output nonuniformity	10% standard at 50% of saturation output
Power supply	+12 V $\pm$ 0.5 V (0.5A or less)
Operational ambient temperature	0 $\sim$ +40 $^{\circ}$ C (with no icing or condensation)
Operational humidity range	85% Max
Storage temperature range	-10 $^{\circ}$ C $\sim$ +65 $^{\circ}$ C(with no icing or condensation)
Weight	720g or less
External dimension	80(W) $\times$ 100(H) $\times$ 60.4(D) size except the salient
Lens mount	F mount
Additional function	FFC compensation Base / Full config. switchable Horizontal / vertical binning , horizontal/ vertical averaging Switchable clock speed

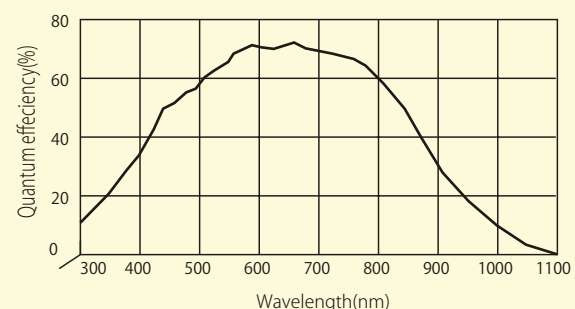
### Overview

- The TL-85K35ACL inherits the specifications of the conventional model TL-8500CL, and has additional specifications the binning mode and the switching function of clock speed.
- Approximately twice the sensitivity is achieved by the vertical binning function.
- Since the configuration of the Camera Link (Base / Full Configuration) and clock speed (85/80/50MHz) are selectable, this camera can be set to a suitable video output format for the system.
- Since this model inherits the external dimensions and other specifications of the conventional model, it is easy to replace.
- Industrial digital Line scan camera equipped with a CMOS image sensor which has linearly arranged 8,192 photodiodes.
- CMOS line scan camera with 8,192 pixel resolution, 80/35kHz scan rate and 680/400/160MHz data rate.

### Features

- It matches well to most of capture boards from other manufacturers, which makes it possible to construct high-precision image processing systems.
- Possible to get high-definition images thanks to 3.5 $\mu$ m square pixel size.
- Equipped with Global shutter function and FFC function.
- Anti-blooming function is incorporated.
- Possible to switch between Base and Full config. mode via serial communication.
- Equipped with versatile F-mount.
- Dark current correction circuit helps to obtain stable images even when the ambient temperature changes.
- The equipment operates with a single DC12V power source.
- Reduction in size and weight is achieved by original design.

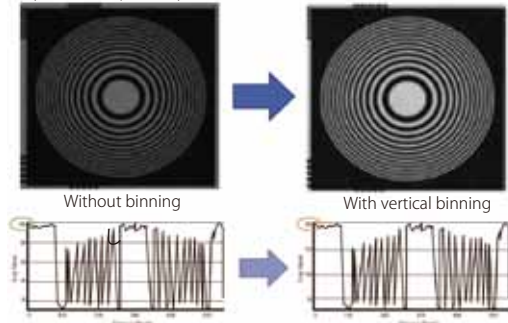
### Spectral Sensitivity



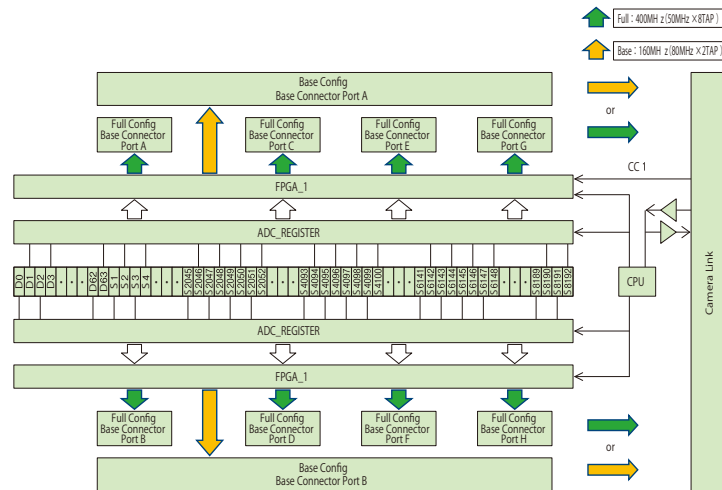
**Binning**

Although the resolution is sacrificed, virtually increased light-receiving area improves sensitivity by adding the signal of pixels. Since the sensitivity is proportional to the pixel area, the sensitivity becomes two times higher in the horizontal binning, and four times higher in the horizontal and vertical simultaneous binning.

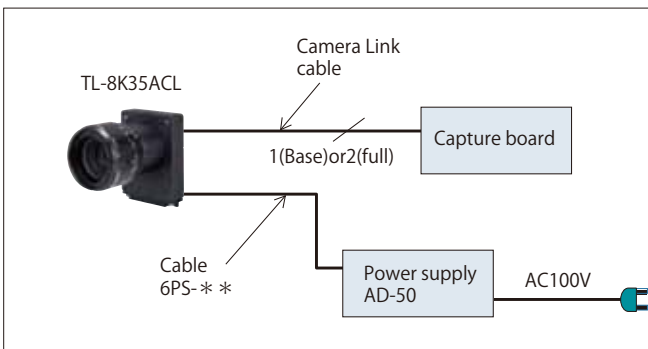
An example at F4/30 μsec exposure



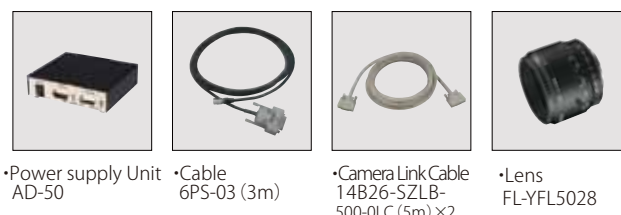
**CCD Image sensor**



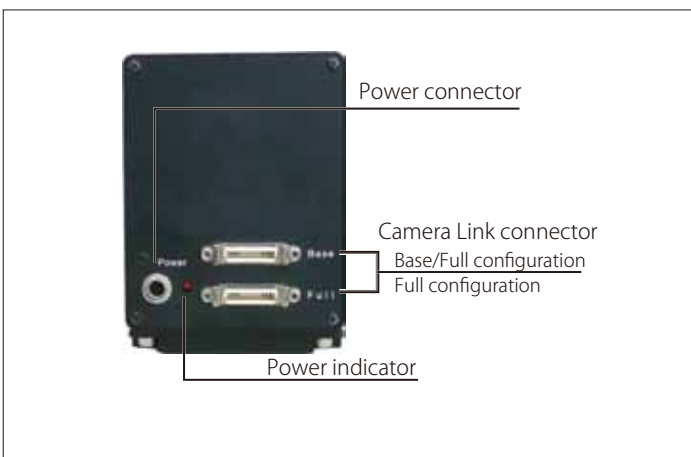
**Configuration Diagram**



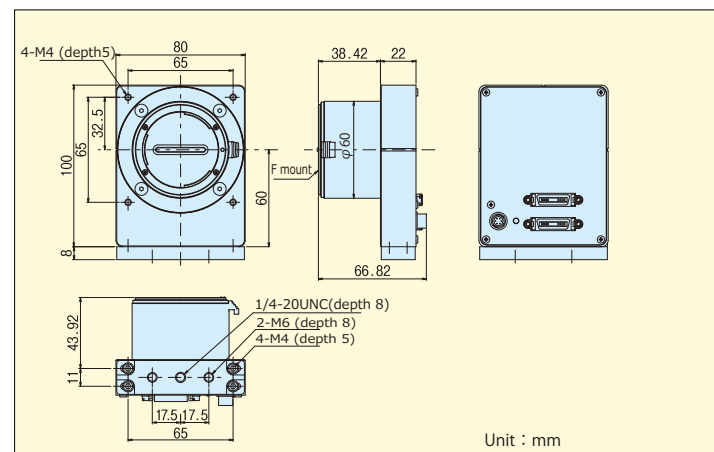
**Example of option Items (Sold separately)**



**Back panel**



**Dimensional Outline Drawing**



● It may be changed without a notice about all items (product name, a model, specifications, external form dimensions, materials, the price) explained by this catalogue.  
 ● We do not take responsibility about any accident damage by an error in the use of deficiency in the construction and deficiency of the maintenance check and this product, the natural disaster (surge, including lightning-induced).

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